

### AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently Amended) A computer program product, tangibly embodied in a machine readable storage device, the computer program product comprising instructions operable to cause data processing apparatus to perform operations comprising:

receiving a plurality of process data items associated with a plurality of process instances that are executed using a plurality of components operating in a distributed computer system, each process data item comprising application data and having been collected by agents associated with each of the components ~~an agent corresponding process;~~

comparing in accordance with a plurality of predefined rules each received process data item with one or more other received process data items to identify process data corresponding to process instances executed on the distributed computer system ~~common application data;~~

grouping into a first group a plurality of process data items corresponding to a first process instance ~~having common application data;~~

~~discovering a first process instance associated with the first group of process data items,~~ the first process instance being a single execution of a first sequence of related steps carried out in the distributed computer system;

grouping into a second group a plurality of process data items corresponding to a second process instance, the second process instance being a single execution of a second sequence of related steps carried out in the distributed computer system; and

reconstructing ~~generating a reconstruction of the first and second process instances~~ instance based on the process data items in the first and second groups, respectively, wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system ~~group.~~

2. (Original) The computer program product of claim 1, wherein the operations further comprise:

modeling a process based on the reconstruction of the first process instance.

3. (Previously Presented) The computer program product of claim 1, wherein the operations further comprise:

monitoring the first process instance based on the process data items in the first group.

4. (Currently Amended) The computer program product of claim 3, wherein the process data items are collected by the agents agent upon the occurrence of a predetermined condition, and wherein monitoring the first process instance comprises modifying the predetermined condition.

5. (Original) The computer program product of claim 3, wherein the process data items have a first type, and wherein monitoring the first process instance further comprises specifying a second type of process data item for the agent to collect.

6.-9. (Cancelled)

10. (Currently Amended) A computer program product, tangibly embodied in machine readable storage device, the computer program product comprising instructions operable to cause data processing apparatus to perform operations comprising:

receiving a specification of a predetermined condition;

upon the occurrence of the predetermined condition, collecting a plurality of process data items associated with ~~a component of a plurality of~~ components operating in a distributed computer system each process data item comprising application data; and

transferring the process data items to a central system operable to discover and reconstruct a first and second process instances ~~instance~~ based on common application data found in the process data items, the first and second process instances ~~instance~~ each being a single execution of a sequence of related steps carried out in the distributed computer system,

wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system.

11. (Original) The computer program product of claim 10, wherein the operation of collecting the process data items occurs without modifying the component.

12. (Original) The computer program product of claim 10, wherein the operations further comprise:

receiving a specification of a second predetermined condition; and

upon the occurrence of the second predetermined condition, collecting additional process data items associated with the component.

13. (Original) The computer program product of claim 10, wherein the operations further comprise:

receiving a specification of a second component;

upon the occurrence of another predetermined condition, collecting other process data items associated with the second component; and

transferring the other process data items to the central system.

14. (Currently Amended) A method of monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the method comprising:

~~using an agent to collect~~ collecting a plurality of process data items associated with a plurality of components operating in a distributed computer system, each process data item comprising application data associated with respective components of the plurality of components;

transferring the process data items from the agent to a central system;

comparing in accordance with a plurality of predefined rules each transferred process data item with one or more other transferred process data items to identify process data corresponding to process instances executed on the distributed computer system ~~common~~

~~application data;~~

grouping into a first group in the central system a plurality of process data items ~~having common application data;~~ corresponding to a first process instance

~~discovering a first process instance associated with the first group of process data items,~~  
the first process instance being a single execution of a sequence of related steps carried out in the distributed computer system;

grouping into a second group a plurality of process data items corresponding to a second process instance, the second process instance being a single execution of a second sequence of related steps carried out in the distributed computer system; and

reconstructing ~~generating a reconstruction of the first and second process instances~~  
~~instance based on the process data items in the first and second groups, respectively, wherein~~  
reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system ~~group.~~

15. (Currently Amended) A method of monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the method comprising:

receiving a plurality of process data items associated with a plurality of components operating in a distributed computer system, each process data item comprising application data and having been collected by an agent;

comparing in accordance with a plurality of predefined rules each received process data item with one or more other received process data items to identify common application data;

grouping into a first group a plurality of process data items having common application data that corresponds to a first process instance;

~~discovering a first process instance associated with the first group of process data items,~~  
the first process instance being a single execution of a sequence of related steps carried out in the distributed computer system;

grouping into a second group a plurality of process data items having common application data that corresponds to a second process instance, the second process instance being a single execution of a second sequence of related steps carried out in the distributed computer

system; and

reconstructing the first and second process instances ~~instance~~ based on the process data items in the first and second groups, respectively, wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system group.

16. (Original) The method of claim 15, wherein the method further comprises:  
modeling a process based on the reconstruction of the first process instance.
17. (Previously Presented) The method of claim 15, wherein the method further comprises:  
monitoring the first process instance based on the process data items in the first group.
18. (Currently Amended) A method of monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the method comprising:  
receiving a specification of a predetermined condition;  
upon the occurrence of the predetermined condition, collecting a plurality of process data items associated with ~~a component of a plurality of~~ components operating in a distributed computer system, each process data item comprising application data; and  
transferring the process data items to a central system operable to discover and reconstruct a first and second process instances ~~instance~~ based on common application data found in the process data items, the first and second process instances ~~instance~~ each being a single execution of a sequence of related steps carried out in the distributed computer system, wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system.
19. (Currently Amended) An apparatus comprising:  
means for receiving a plurality of process data items associated with a plurality of components operating in a distributed computer system, each process data item comprising application data and having been collected by an agent;

means for comparing, in accordance with a plurality of predefined rules, each received process data item with one or more other received process data items to identify common application data;

means for grouping into a first group a plurality of process data items having common application data that corresponds to a first process instance;

~~means for discovering a first process instance associated with the first group of process data items,~~ the first process instance being a single execution of a sequence of related steps carried out in the distributed computer system;

means for grouping into a second group a plurality of process data items having common application data that corresponds to a second process instance, the second process instance being a single execution of a second sequence of related steps carried out in the distributed computer system; and

means for reconstructing the first and second process instances instance based on the process data items in the first and second groups, respectively, wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system group.

20. (Original) The apparatus of claim 19, further comprising:

means for modeling a process based on the reconstruction of the first process instance.

21. (Previously Presented) The system of claim 19, wherein the system further comprises:

means for monitoring the first process instance based on the process data items in the first group.

22. (Currently Amended) A system for monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the system comprising:

means for receiving a specification of a predetermined condition;

means for, upon the occurrence of the predetermined condition, collecting a plurality of process data items associated with a plurality of components operating in a distributed computer

system, each process data item comprising application data; and

means for transferring the process data items to a central system operable to discover and reconstruct a first and second process instances ~~instance~~ based on common application data found in the process data items, the first and second process instances ~~instance~~ each being a single execution of a sequence of related steps carried out in the distributed computer system, wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system.

23. (New) The computer program product of claim 1, wherein the operations further comprise:

comparing the first and second process instances to provide a comparison, wherein the first and second process instances correspond to a common process; and

providing a process context based on the comparison, the process context corresponding to a plurality of possible execution paths through the common process.

24. (New) The computer program product of claim 1, wherein the operations further comprise:

receiving process data items associated with the plurality of process instances after execution of the process instances, each process data item comprising application data and having been collected by agents associated with each of the components.

25. (New) The computer program product of claim 10, wherein the operations further comprise:

comparing the first and second process instances to provide a comparison, wherein the first and second process instances correspond to a common process; and

providing a process context based on the comparison, the process context corresponding to a plurality of possible execution paths through the common process.

26. (New) The computer program product of claim 10, wherein the operations further comprise:

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receiving process data items associated with the plurality of process instances after execution of the process instances, each process data item comprising application data and having been collected by agents associated with each of the components.